6V/800mW single-channel power amplifier

BA527

The BA527 is a monolithic power amplifier designed for portable cassette players and radio cassette players. With a 6V power supply, it has a rated output of 800mW into a 4Ω load (THD = 10%). It is a high-grade design that generates almost no audible switching noise, and is ideal for high-end compact cassette players (including those with radio).

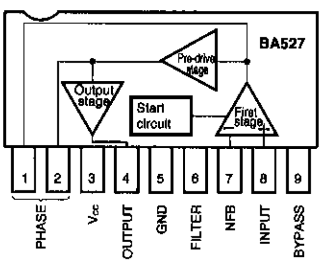
●Applications

Portable cassette recorders and radio cassette recorders

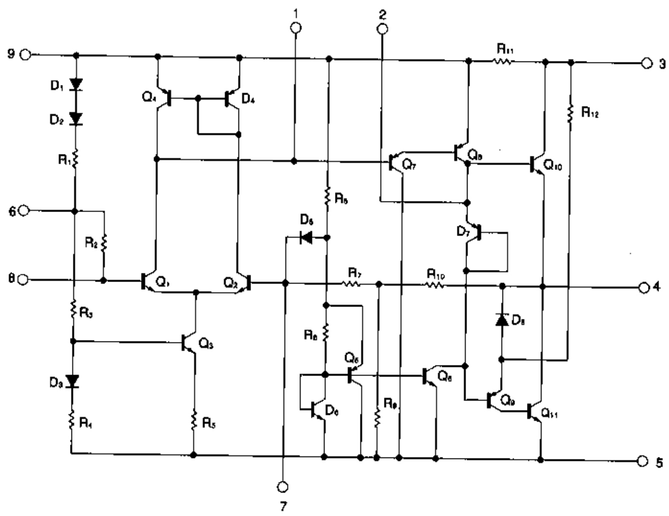
●Features

1) Rated power output is 800mW (V_{CC} = 6V and a 4Ω load (THD = 10%). Maximum output is 1300mW.
2) Pin compatible with the Rohm BA526 power amplifier, and can be interchanged to suit the application.
3) Compact 9-pin SIP package that does not require a heatsink. Allows more compact set designs, and is easy to mount.
4) High ripple-rejection ratio (55dB) and generates almost no "pop" noise.
5) Excellent low voltage characteristics (starts operating at SV <2.8V).

●Block diagram



● Internal circuit diagram



● Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	9	V
Power dissipation	Pd	950*	mW
Operating temperature	Topr	−10~65	°C
Storage temperature	Tstg	−30~125	°C

* Reduced by 9.5mW for each increase in Ta of 1°C over 25°C.

● Electrical characteristics (unless otherwise specified Ta = 25°C, V_{CC} = 6V, R_L = 4Ω, f= 1kHz and R_{NF} = 220Ω)

Parameter	Symbol	Min	Typ.	Max.	Unit	Conditions	Measurement Circuit
Quiescent circuit current	I_Q	−	16	25	mA	V_{IN}=0V_{rms}	Fig.1
Closed-circuit voltage gain	G_{VC}	43	46	49	dB	V_O=0.45V_{rms}	Fig.1
Maximum output power	P_{OM}	900	1300	−	mW	−	Fig.1
Rated output power	P_{OUT}	700	800	−	mW	THD=10%	Fig.1
Output noise voltage	V_{NO}	−	0.2	0.7	mV_{rms}	R_g=0Ω	Fig.1
Total harmonic distortion	THD	−	0.45	1.8	%	P_O=50mW, 1kHz	Fig.1
Input resistance	R_{IN}	−	47	−	kΩ	P_O=50mW	Fig.1

●Measurement circuit

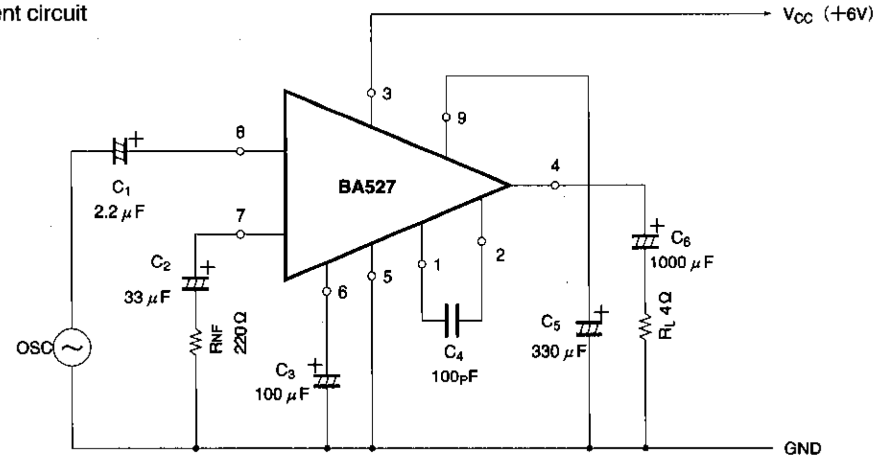


Fig. 1

●Application example

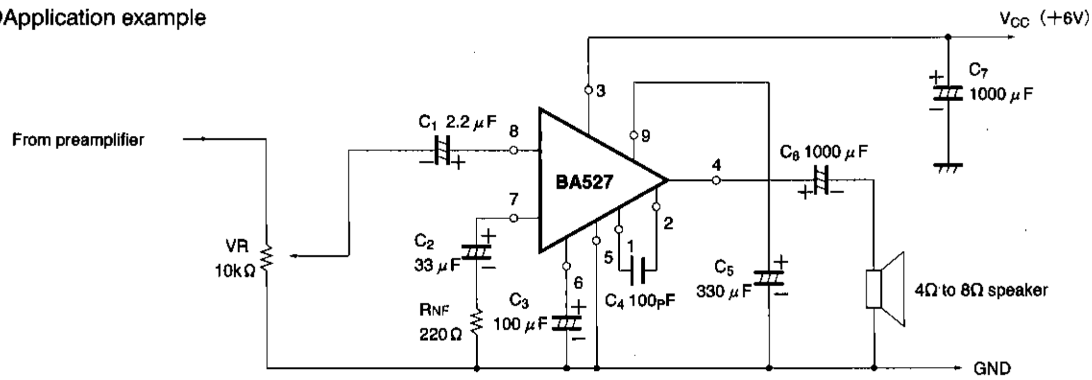


Fig. 2

●External dimensions (Unit: mm)

